

EUROPEAN PATENT OFFICE

Patent Abstracts of Jap.

PUBLICATION NUMBER : 07011755
PUBLICATION DATE : 13-01-95

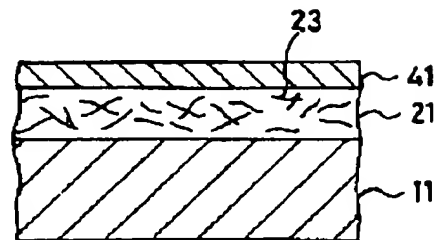
APPLICATION DATE : 28-06-93
APPLICATION NUMBER : 05184401

APPLICANT : TAJIMA INC;

INVENTOR : TAJIMA EIICHI;

INT.CL. : E04F 15/16 D06N 1/00 // A47G 27/02

TITLE : FLOOR MATERIAL MADE OF
SYNTHETIC RESIN



ABSTRACT : PURPOSE: To increase the feeling of high grade and also reduce cost by providing a surface decorative layer consisting of colored fiber dispersed in transparent or semi-transparent synthetic resin.

CONSTITUTION: On a base material layer 11 consisting of vinyl chloride resin combined with a filler or the like, a surface decorative layer 21 consisting of colored fiber 23 of polyester, carbon fiber, glass fiber or the like dispersed in transparent or semi-transparent synthetic resin such as vinyl chloride resin is provided, and a synthetic resin floor material is formed by providing on the surface decorative layer 21 a transparent or semi-transparent surface protection layer 41 consisting of vinyl chloride resin, polyester resin, ultraviolet ray curing type resin or the like.

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XP-002121007

AN - 1995-085993 [12]

AP - JP19930184401 19930628 JP19930184401 19930628; [Previous Publ.
J07011755]

PR - JP19930184401 19930628

TI - Synthetic resin floor material for floor tile, providing carpet-like
pattern - has surface facing layer obtd. by dispersing coloured fibre
into (semi)transparency synthetic resin

IW - SYNTHETIC RESIN FLOOR MATERIAL FLOOR TILE CARPET PATTERN
SURFACE FACE

LAYER OBTAIN DISPERSE COLOUR FIBRE SEMI TRANSPARENT SYNTHETIC
RESIN

PA - (TAZI-N) TAZIMA KK

PN - JP7011755 A 19950113 DW199512 E04F15/16 003pp

- JP2759146B2 B2 19980528 DW199826 E04F15/16 003pp

IC - A47G27/02 ; D06N1/00 ; E04F15/16

AB - J07011755 Floor material made of a synthetic resin, has a surface
facing layer formed by dispersing a coloured fibre into a transparent
of semi-transparent synthetic resin. Alternatively, in the surface
facing layer, a transparent or semi-transparent synthetic resin is
impregnated into a coloured fibre aggregate comprising a nonwoven
fabric.

- Pref. fibre comprises nylon, rayon, polyethylene terephthalate,
polybutylene terephthalate, carbon fibre, or glass fibre. Transparent
or semi-transparent synthetic resin comprises a vinyl chloride resin,
polyester resin or UV curable resin.

- USE/ADVANTAGE - Floor material is used for a floor tile or a long
floor and has carpet-like pattern. Fixing coloured fibre in the
synthetic resin readily produces carpet-like floor material. Use of
floor material provides floor of high quality at lower cost. Floor
material assures easy cleaning and maintenance.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the flooring made of synthetic resin of a carpet design used as a floor tile, long flooring, etc.

[0002]

[Description of the Prior Art] As flooring used in office etc., it divides roughly and there are flooring made of synthetic resin which has a surface makeup layer made of synthetic resin, and a carpet tile in which the fiber pile was implanted. Although the reason a carpet tile is used has generating of a walk sound also in the description of a functional side, such as being few, the first reason is in the appearance by which luxury is directed. however, in one side, dust and dust with a small carpet tile are [that it is easy to collect] expensive also in price difficult [sufficient cleaning] -- etc. -- it has the problem.

[0003]

[Problem(s) to be Solved by the Invention] This invention offers the flooring which can express the pattern of a carpet design, though it is synthetic resin.

[0004]

[Means for Solving the Problem] The flooring made of synthetic resin of the carpet design of this invention is characterized by having the surface makeup layer which comes to carry out impregnation of transparence or the translucent synthetic resin to the fiber aggregates, such as a surface makeup layer which comes to distribute coloring fiber in transparence thru/or translucent synthetic resin, or a nonwoven fabric.

[0005]

[Example] Drawing 1 is the sectional view showing the lamination of the flooring of the example of this invention. On the base material layer 11 which

consists of vinyl chloride resin with which the bulking agent etc. was blended, the surface makeup layer 21 and the surface protective layer 41 are formed in one.

[0006] The fiber 23 colored into synthetic resin, such as transparence thru/or translucent vinyl chloride resin, is distributed and supported, and the surface makeup layer 21 becomes, consequently the pattern of a carpet design is expressed. An appearance can be adjusted by adjusting the variance of fiber 23, die length, a size, a color, etc.

[0007] Although what was colored the same color may be distributed as fiber 23, design-effectiveness is further improved by distributing two or more kinds of fiber 23 colored a different color.

[0008] As fiber 23, polyester, such as nylon, rayon, polyethylene terephthalate, and polybutylene terephthalate, carbon fiber, a glass fiber, etc. are used. About 0.5-15mm is suitable for the die length of fiber 23, and 5micro - about 1mm of a size is desirable.

[0009] The surface protective layer 41 consists of transparence thru/or translucent vinyl chloride resin, polyester resin, ultraviolet curing mold resin, etc., and abrasion resistance is given or it raises the cubic effect of the carpet design pattern formed in the surface makeup layer 21. In addition, you may omit, without forming the surface protective layer 41 in drawing 1 . Although the thickness of each class is arbitrary, about 0.1-0.5mm is [the base material layer 11] suitable for about 1-5mm and the surface makeup layer 21 for about 1-3mm and the surface protective layer 41.

[0010] After drawing 2 shows other examples of this invention and sprinkles a pellet 25 on the base material layer 11, it accumulates a pellet 25 in push and forms the surface makeup layer 21 in one with the base material layer 11. A pellet 25 is the transparence thru/or the translucent synthetic-resin particle which distributes and supports coloring fiber 23, and once it distributes fiber 23 and creates a sheet-like object in synthetic resin, it grinds thru/or cuts and it can obtain this. Since such a pellet 25 joins together at random and forms the surface makeup layer 21, the directivity of the orientation of fiber has disappeared and the outstanding design effectiveness is acquired. Moreover, the still more complicated design effectiveness is acquired by using combining two or more sorts of pellets containing the fiber of a different color, and the pellet fine-colored the color from which synthetic resin differs.

[0011] In the example of drawing 3 , the joint unification of the same raw material pellet 25 as drawing 2 is carried out by binder resin 27, the surface makeup layer 21 is formed, and the hardened material of a vinyl-chloride-

resin paste etc. is used as binder resin 27. If binder resin 27 is fine-colored, different design effectiveness from a case with drawing 2 will be acquired. [0012] In the example of drawing 4, the paste of colorlessness or the fine-colored vinyl chloride resin is applied on the base material layer 11. After sprinkling the fiber 23 colored on it or distributing fiber beforehand during a paste, After applying this to a base material, a paste is made to harden, a lower layer 29 is formed, the upper layer 43 which subsequently consists of transparency thru/or translucent synthetic resin is formed, it unifies, and the surface makeup layer 21 is constituted. It is functioning also considering the upper layer 43 as a surface protective layer. Since fiber 23 is sprinkled at random also in this case, there is no directivity in the orientation of fiber 23, and a carpet pattern good in design is acquired.

[0013] Drawing 5 is the sectional view showing the example of further others of the flooring made of synthetic resin of this invention. monochrome -- or the surface makeup layer 21 by which impregnation of transparency thru/or the translucent impregnation synthetic resin 33 was carried out, and it was formed in the nonwoven fabric 31 colored regularly or at random in two or more colors with this impregnation nonwoven fabric -- the base material layer 11 top -- a laminating -- it is unified.

[0014] Various deformation is possible for the flooring made of synthetic resin of this invention besides the above, for example, it can prepare a surface protective layer in the flooring shown in drawing 2 -5 further, can increase a cubic effect by performing surface embossing to the flooring shown at drawing 1, or can use a part of base material layer as a foaming layer.

[0015] An appearance further similar to a carpet can be expressed by forming a concavo-convex pattern in a front face especially. For example, as shown in drawing 6, if the diameter d of heights gives embossing of a line [crevice] 2-5mm to the surface makeup layer 21 which supported coloring fiber 23, an appearance extremely similar to a carpet will be presented. Moreover, as shown in drawing 7, the surface makeup layer 21 which has the same concavo-convex condition as drawing 6 can be formed also by maintaining the configuration of a pellet (chip) 25 and fixing a pellet 25 on the base material layer 11. The pellet 25 is being fixed to the base material layer 11 with the binder resin 27 which consists of hardened materials, such as a vinyl-chloride-resin paste.

[0016]

[Effect of the Invention] According to this invention, by using colored fiber, fixing this in synthetic resin, and forming a surface makeup layer, the flooring

made of synthetic resin of a carpet design can be manufactured easily, a floor with a high-class feeling can be realized by low cost, and cleaning of a floor and management are also easy.

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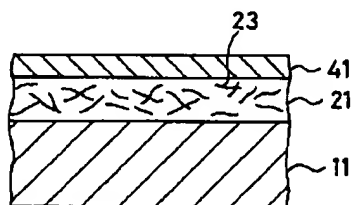
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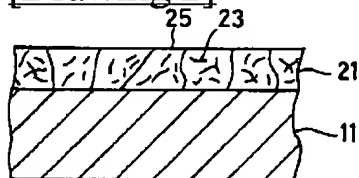
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DRAWINGS

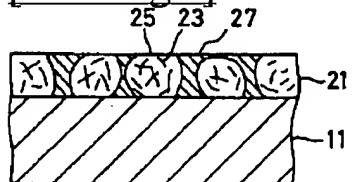
[Drawing 1]



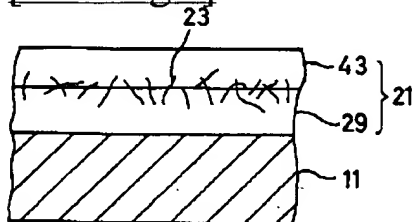
[Drawing 2]



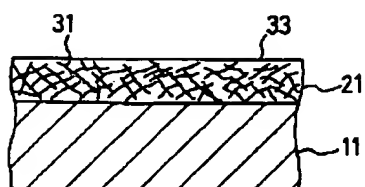
[Drawing 3]



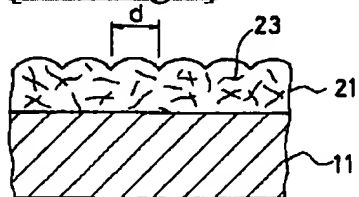
[Drawing 4]



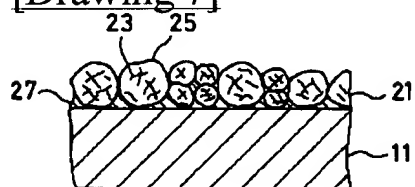
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]